DOCUMENT RESUME

ED 311 496 CS 506 812

AUTHOR Goudena, Paul P.
TITLE The Problem of Abbreviation and Internalization of Private Speech.
PUB DATE Apr 89
NOTE 17p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Kansas City, MO, April 27-30, 1989).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Communication Research; *Inner Speech (Subvocal); *Speech Acts; Speech Communication; *Young Children
IDENTIFIERS *Internalization; Intrapersonal Communication; *Private Speech; Speech Functions; Speech Research; Vygotsky (Lev S)

ABSTRACT

According to Lev Vygotsky, private speech has a functional value for the child during problem solving. As children grow older, private speech is thought to become inner, non-observable speech. Both private and inner speech are abbreviated. A study tested the hypothesis of the progressive abbreviation of private speech. Private speech data were collected during a 6-minute period of puzzle task performance. Group one consisted of 22 children with a mean age of 53.5 months and group two consisted of 19 children with a mean age of 70.1 months. For the younger group, mean length of utterance (MLU) was 2.4; for the older group, MLU was 2.6. Analysis did not produce any indication of the correctness of Vygotsky's assertion about the progressive abbreviation of private speech. Such abbreviated social speech is not only produced by adults, but also by young children interacting with adults in a task setting. What remains unclear is the way in which the transformation of private speech into inner speech occurs. (Three tables of data and two figures are included.) (MG)

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The problem of abbreviation and internalization of private speech

Paul P. Goudena

Faculty of Social Sciences

Heidelberglaan 1

3584 CS Utrecht

Holland

1989 Biennial Meeting Society for Research in Child Development

April 27 - April 30 Kansas City, Missouri

Symposium: The significance and functions of children's private speech: Current research in Europe and U.S. Chair: R. Diaz.

CS506812

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The problem of abbreviation and internalization of private speech

Paul P. Goudena

Introduction.

In the last chapter of Thought and Language, Vygotsky states:

> "Piaget was the first to pay attention to the child's egocentric speech and to see its theoretical significance, but he remained blind to the most important trait of egocentric speech - its genetic connection with inner speech" (Vygotsky, 1986, p. 226).

In this quotation Vygotsky not only shows his disagreement with Piaget's conceptualization of egocentric or private speech, but also indicates the main reason for his preoccupation with the study of private speech: his conviction that private speech is the link between social and inner speech.

First, I will give an outline of Vygotsky's view of the relationship between private speech and inner speech, especially of Vygotsky's claim about the progressive abbreviation of private speech. Then I will present some empirical data concerning this topic. Finally, I will discuss these results in the light of Vygotsky's theoretical position.

Vygotsky's view of the relationship between private and inner speech.

According to Vygotsky, private speech has a functional value for the child during problem solving. It helps the child to become conscious of certain aspects of the situation and to overcome difficulties. For example, a child that needed a blue pencil, while drawing, said to himself:

> "Where's the pencil? I need a blue pencil. Never mind, I'll draw with the red one and wet it with water; it will become dark and look like blue" (Vygotsky, 1986, p. 30).

Such verbalizations may be produced by young children when they are confronted with difficulties. First, between the ages of three and seven, private speech utterances are observable. As children grow older, private speech is thought to become inner, not-observable speech. Thus: "the same mental operations that the preschooler carries out through voiced egocentric speech are already relegated to soundless inner speech in schoolchildren" (Vygotsky, 1986, p. 30).

In Vygotsky's opinion, private speech is not only similar to inner speech with respect to its functional value, but also with

respect to its structure: both private and inner speech are abbreviated. However, the structural similarity between private and inner speech is thought to be most salient just before private speech begins to disappear from the observable plane. According to Vygotsky, between three and seven years of age, the structure of the child's private speech gradually changes. At three years, social and private speech are nearly identical, both functionally and structurally. At seven years, "speech for self" and "speech for others" are clearly distinctive. Therefore, the vocalization of private speech becomes superfluous and diminishes. Private speech reappears as inner speech, on the internal plane.

Thus, private speech does not disappear because of the increasing capacity of the child to take the viewpoint of the other, as Piaget argued. Vygotsky also opposed to Watson's behavioristic sequence: overt speech - whispering - inner speech, because such a conceptualization does not do justice to the specific structural features of private and inner speech.

According to Vygotsky, the abbreviated character of private and inner speech is intrinsically connected with the predicative form such a kind of speech takes. This means that in inner speech - and in developmentally later forms of private speech - the subject of a sentence and subject-related words are omitted. Because private and inner speech are forms of speech for self, the subject needs not to be mentioned, because the speaker knows

what he or she is talking about. For example, in most cases a child does not say, while doing a puzzle task, "Now I am going to put this yellow piece here", but says : "The yellow one here".

In short, for Vygotsky private speech is a transition phenomenon, which shows "the transition from interpsychic to intrapsychic functioning, i.e., from the social, collective activity of the child to his more individualized activity" (Vygotsky, 1986, p. 228). Such a conceptualization implies that during the internalization process a social quality is preserved. Therefore, intrapsychological functioning may be said to retain a quasi-social nature (Vygotsky, 1981; Wertsch & Stone, 1985).

Structural features of private speech: Empirical research

Although the functional differentiation of private speech has amply been documented by many empirical studies (cf. Fuson's (1979) review), Vygotsky's claim about the structural development of private speech, i.e., the progressive abbreviation of private speech, has hardly received any empirical attention. In fact, I could not find one study devoted to this topic, except for Vygotsky's summary remarks about his own research.

The private speech data from my dissertation project (Goudena, 1983, 1987) give an opportunity to test the hypothesis of the progressive abbreviation of private speech. In this study,

private speech data were collected during a six minute period of puzzle task performance. Prior to this task, the children had been collaborating with an adult on another task.

Data are available from two age groups. Group 1 consisted of 22 children, with a mean age of 53.5 mo., Group 2 consisted of 19 children, with a mean age of 70.1 mo. (see Table 1). In Group 1, 15 children contributed to a total of 113 private speech utterances, in Group 2 14 children produced a total of 104 utterances.

For the younger group, mean length of utterance (MLU) was 2.4, for the older group MLU was 2.6. This difference is not significant (parametrically: t-test, t= - 1.14, n.s.; non-parametrically: Mann-Whitney U test, U= 31.5 (n1= 8, n2= 8), n.s.).

In Figure 1 the distribution of private speech utterances of different word length (1 to 8 words) is shown for the two groups. The distributions are about the same for both groups. There is no statistical basis to reject the null hypothesis in favor of the alternative hypothesis, that the utterances of Group 2 are composed of fewer words than those of Group 1.

Figure 2 shows the proportional distribution of abbreviated (or: predicative) and complete private speech utterances for the two groups. "Abbreviated" means: utterances in which the psychological

subject has been omitted. For example: "This one", "Fits", or "Done". "Complete" means: utterances in which both the psychological subject and predicate are present. For example: "This one is right", "This one should go to a corner", or "Now I will put this one like this". There is no significant difference between the two groups with respect to the proportional distribution of abbreviated and complete private speech utterances (chi square, $z = -0.86$, n.s.). Thus, there is no support for the alternative hypothesis, that the utterances of Group 2 contain a larger proportion of predicative speech than those of Group 1.

Discussion

What do these results mean? First, I want to indicate some restrictions: the two sets of private speech utterances were not very large (113 and 104 utterances), and the mean ages of the two groups were 53.5 mo. and 70.1 mo. In other words, the results of this study need to be corroborated by a replication study with two larger sets of utterances, and with two age groups which are closer to 36 mo. (i.e., three years) and 84 mo. (i.e., seven years), the age range discussed by Vygotsky.

On the other hand, Vygotsky's claim about the progressive abbreviation of private speech is a strong and testable one, and the present analysis did not produce <u>any</u> indication of the

correctness of Vygotsky's assertion. So, one might ask, what about the progressive abbreviation of private speech?

A possible answer to this question may be found in Vygotsky's own discussion of the abbreviated nature of social speech. Vygotsky (1986, p. 236) points out that in certain situations, social speech between adults may have an abbreviated character. For example, when two or more people are waiting for a bus, no one will say, when the bus approaches, "The bus for which we are waiting is coming". People will say: "Coming", or "The bus". Because the topic of interest is clear to the people who are present, elaborated utterances are superfluous. It is easy to conceive of many similar situations. Also, in dialogues such a situation may occur. When both partners know what it's all about, abbreviated speech occurs.

The point I am trying to make here, is that such abbreviated social speech is not only produced by adults, but also by young children interacting with adults in a task setting. This position is consistent with the view that private speech is a continuation of earlier forms of social interaction (cf. Wertsch, 1979). From such a point of view, one need not conceive of private speech as a form of speaking which progressively shows structural change. The abbreviated character of private speech is already present in the utterances of very young speakers.

Finally, I would like to return to the quotation I started with:

Vygotsky's remark about the central feature of private speech, i.e., its developmental relationship with inner speech. Although the present analysis did not provide evidence for the progressive abbreviation of private speech, there is no need to raise doubts about the close connection between private speech and inner speech. Both functionally and structurally, this resemblance is clear. What remains unclear, however, is the way in which the transformation of private speech into inner speech occurs. Apparently, the spatial metaphor of a form of speech gradually changing with respect to structure, and then being transformed into inner speech, is not correct. It seems to me that Leont'ev's (1981, p. 57) remarks are relevant here:

> " ... the process of internalization is not the transferal of an external activity to a preexisting, internal "plane of consciousness": it is the process in which this internal plane is formed".

Such a formulation, which implies "the mastery of socially defined activity" (Wertsch & Stone, 1985, p. 177) by the individual child, is consistent with the results of the present study.

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Table 1. Characteristics of Two Age Groups

		Group 1	Group 2
N Subjects		22	19
Age (mo.)	M	53.5	70.1
	(s.d.)	(2.8)	(4.1)
N Speakers		15	14
Total number of private speech utterances		113	104
Mean length of utterance (MLU)	M	2.4	2.6
	(s.d.)	(1.7)	(1.7)

FIGURE 1

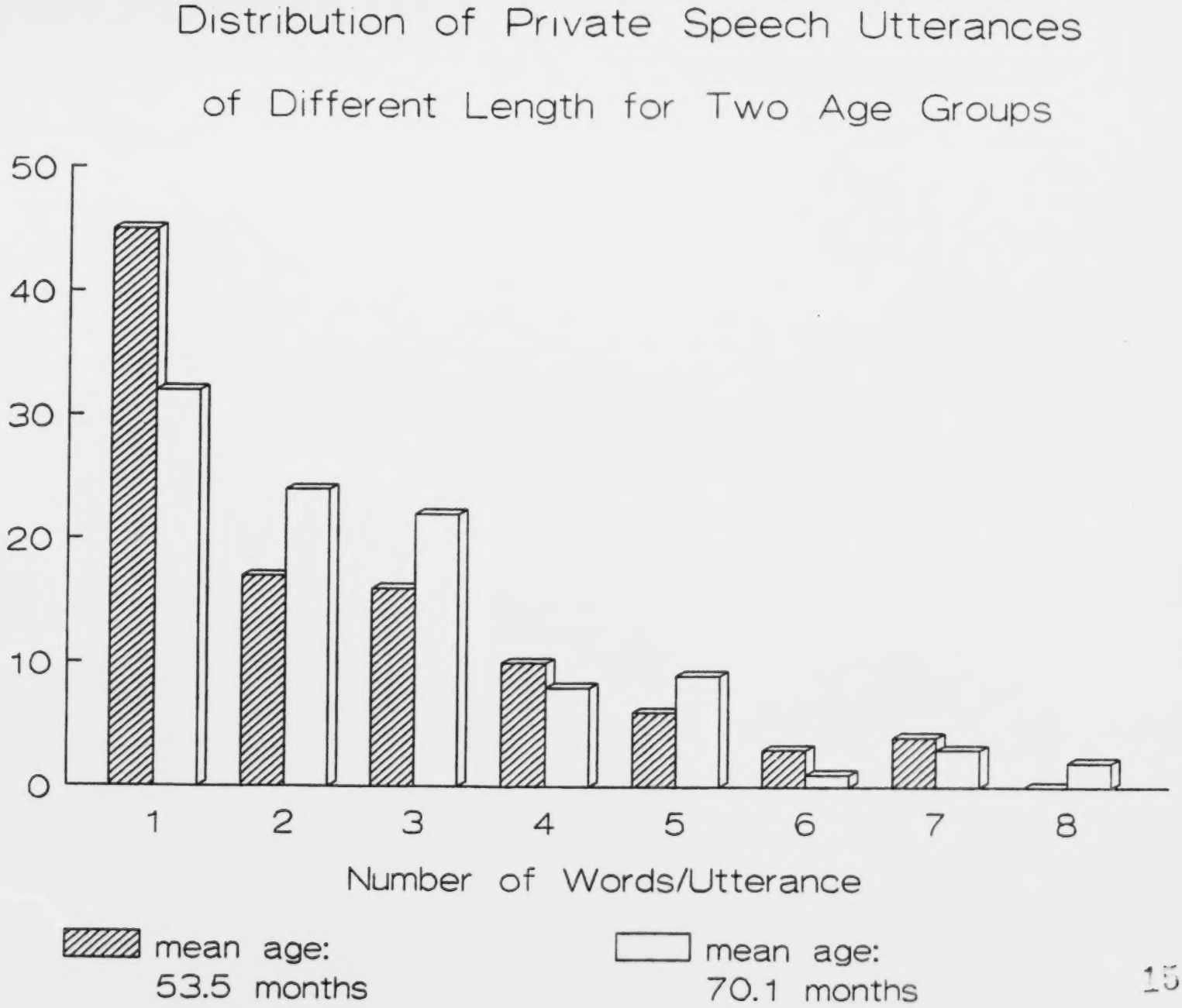
Distribution of Private Speech Utterances
of Different Length for Two Age Groups
50
40
30
20
10
0
1
2
3
4
5
6
7
8
Number of Words/Utterance
mean age:
53.5 months
mean age:
70.1 months

FIGURE 2

Distribution of Two Types of Private Speech Utterances for Two Groups